

FIG. 1

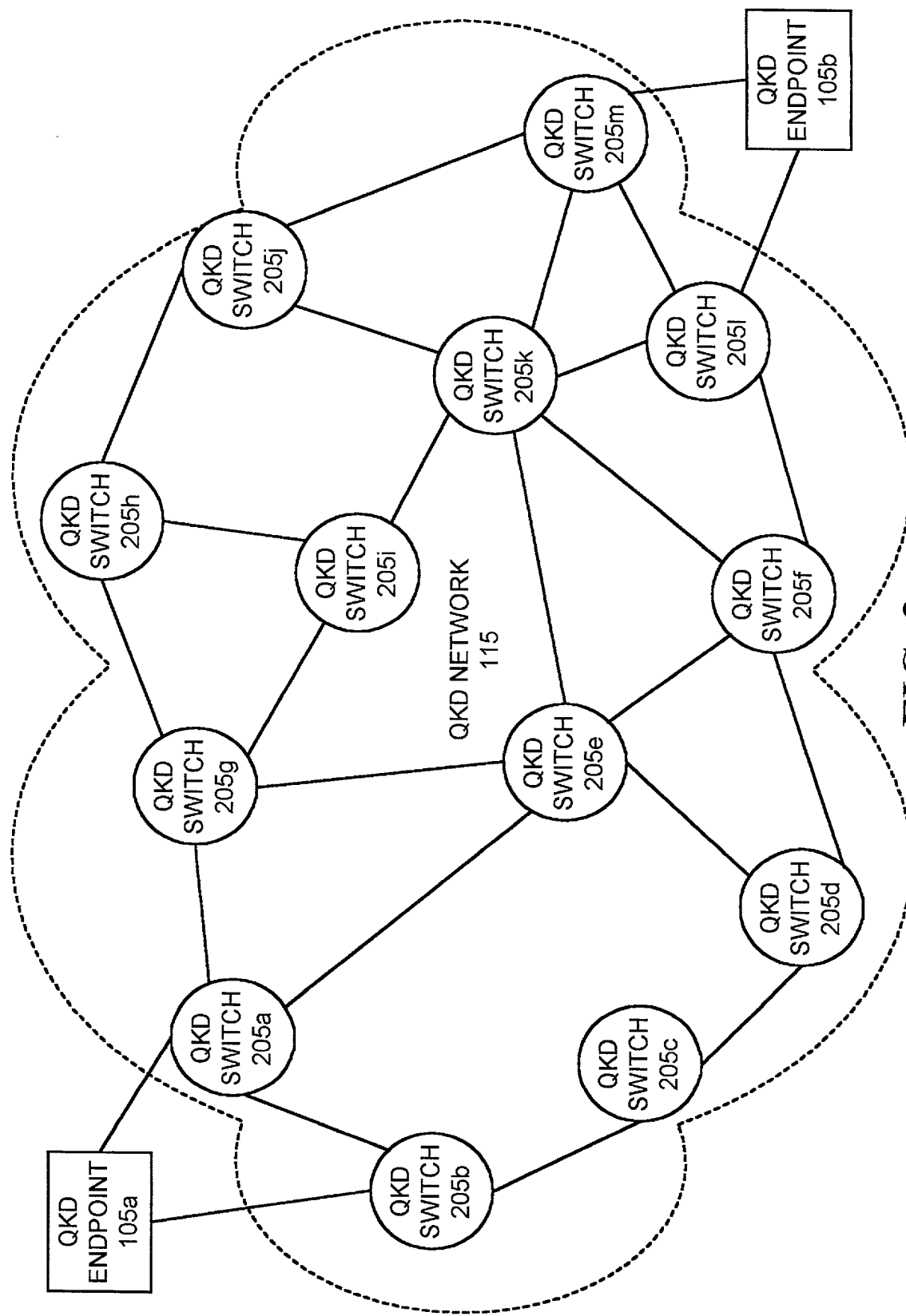


FIG. 2

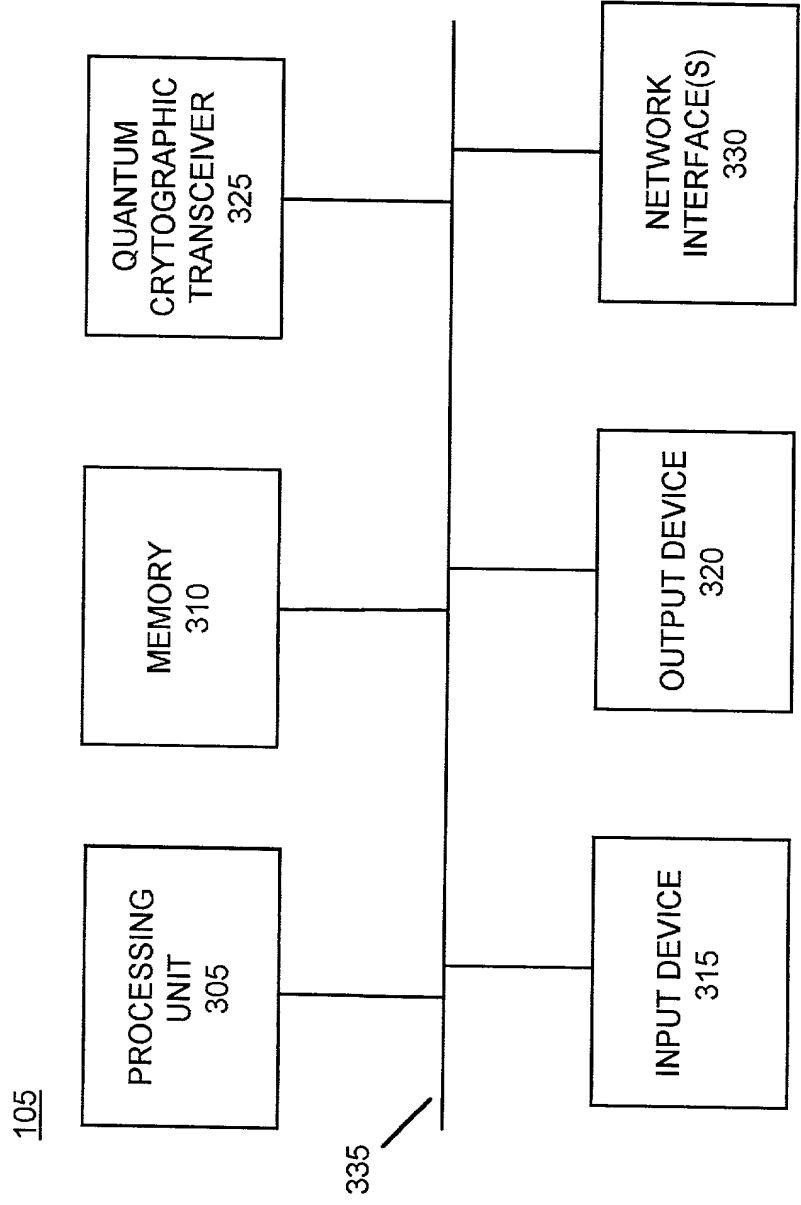


FIG. 3A

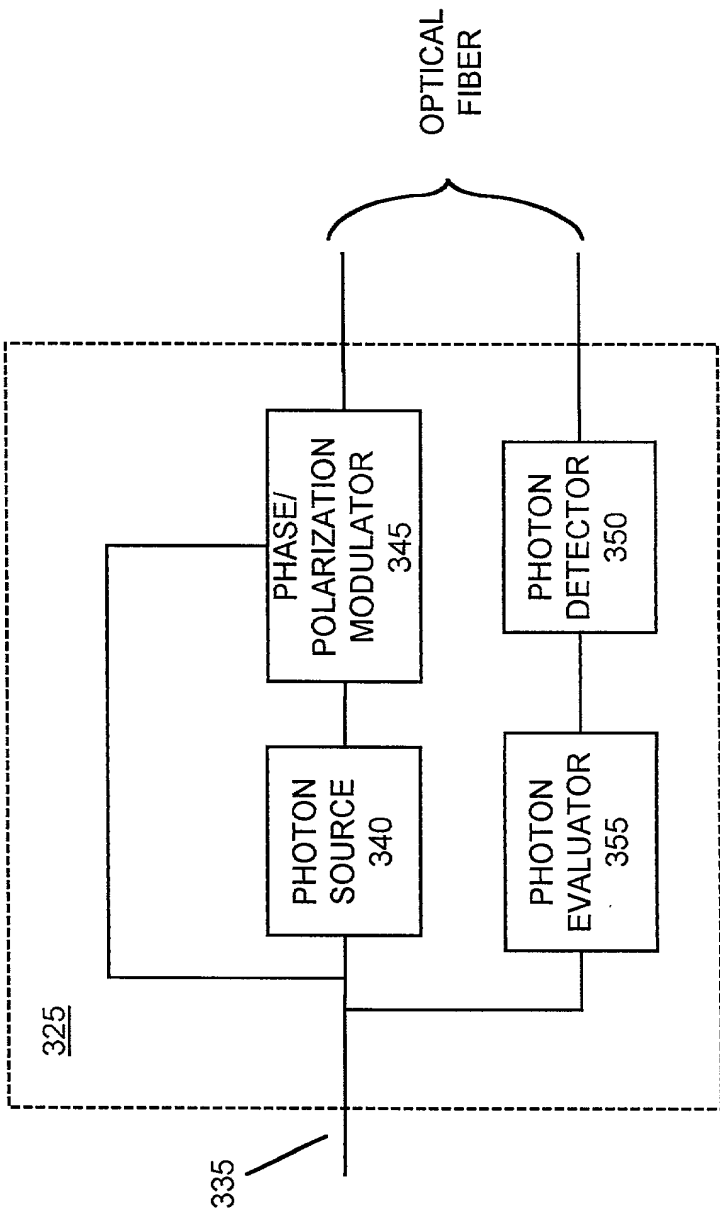


FIG. 3B

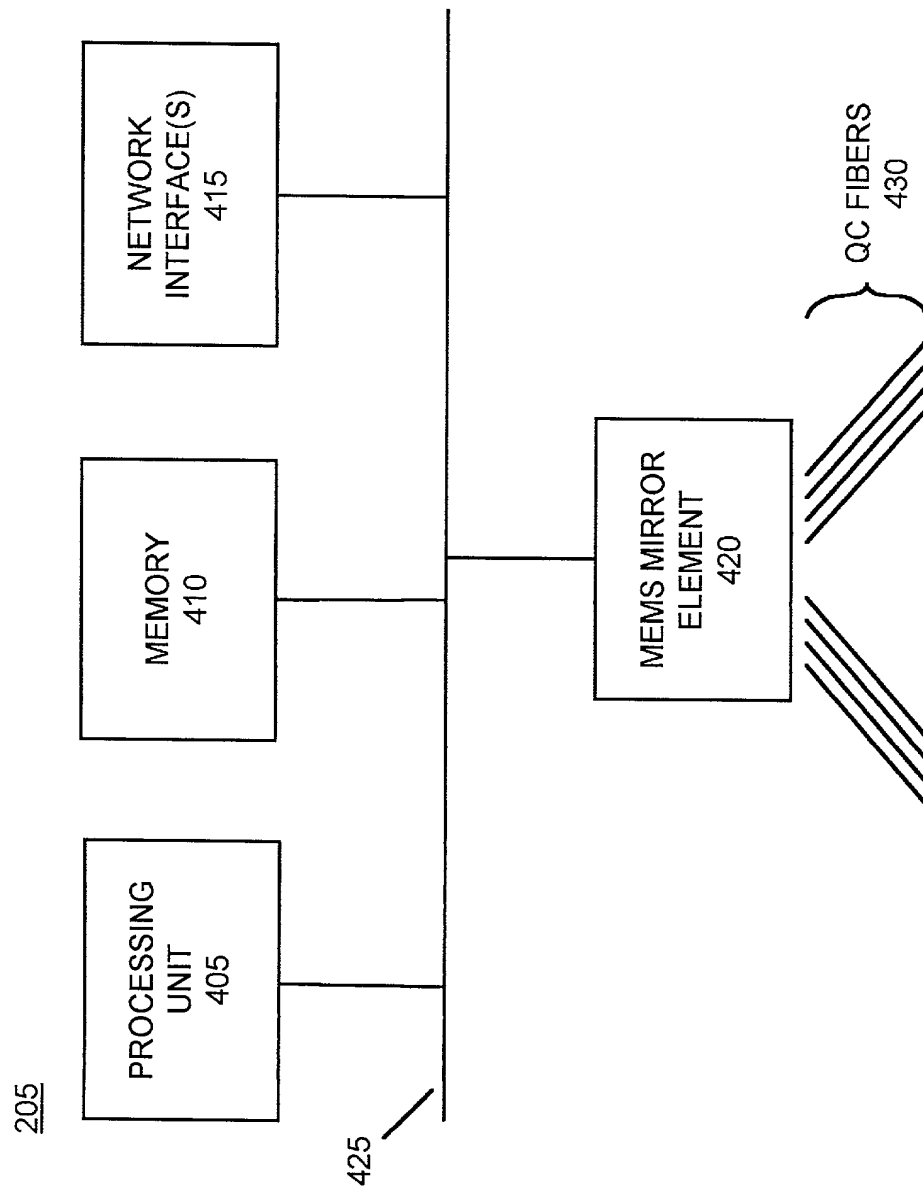


FIG. 4

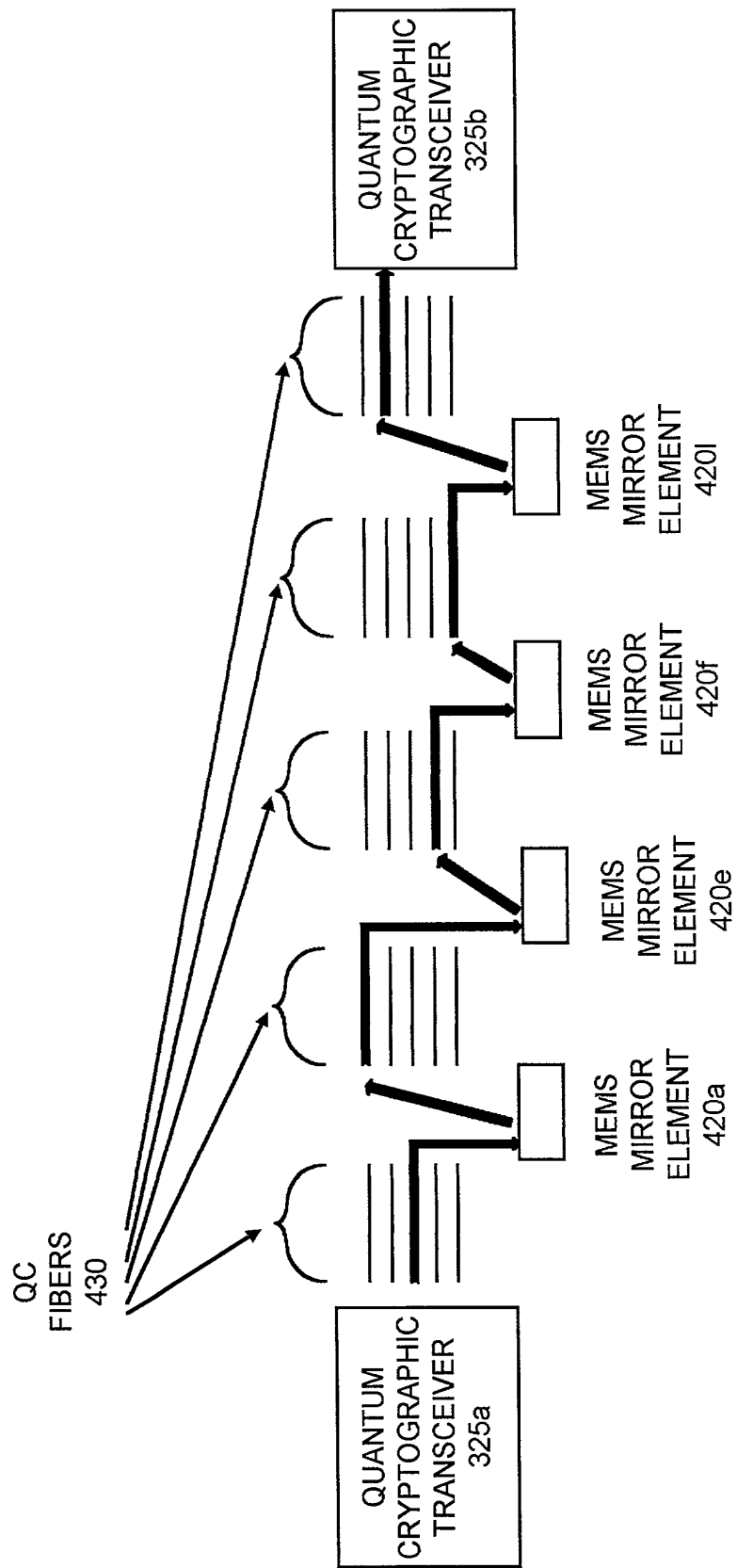


FIG. 5

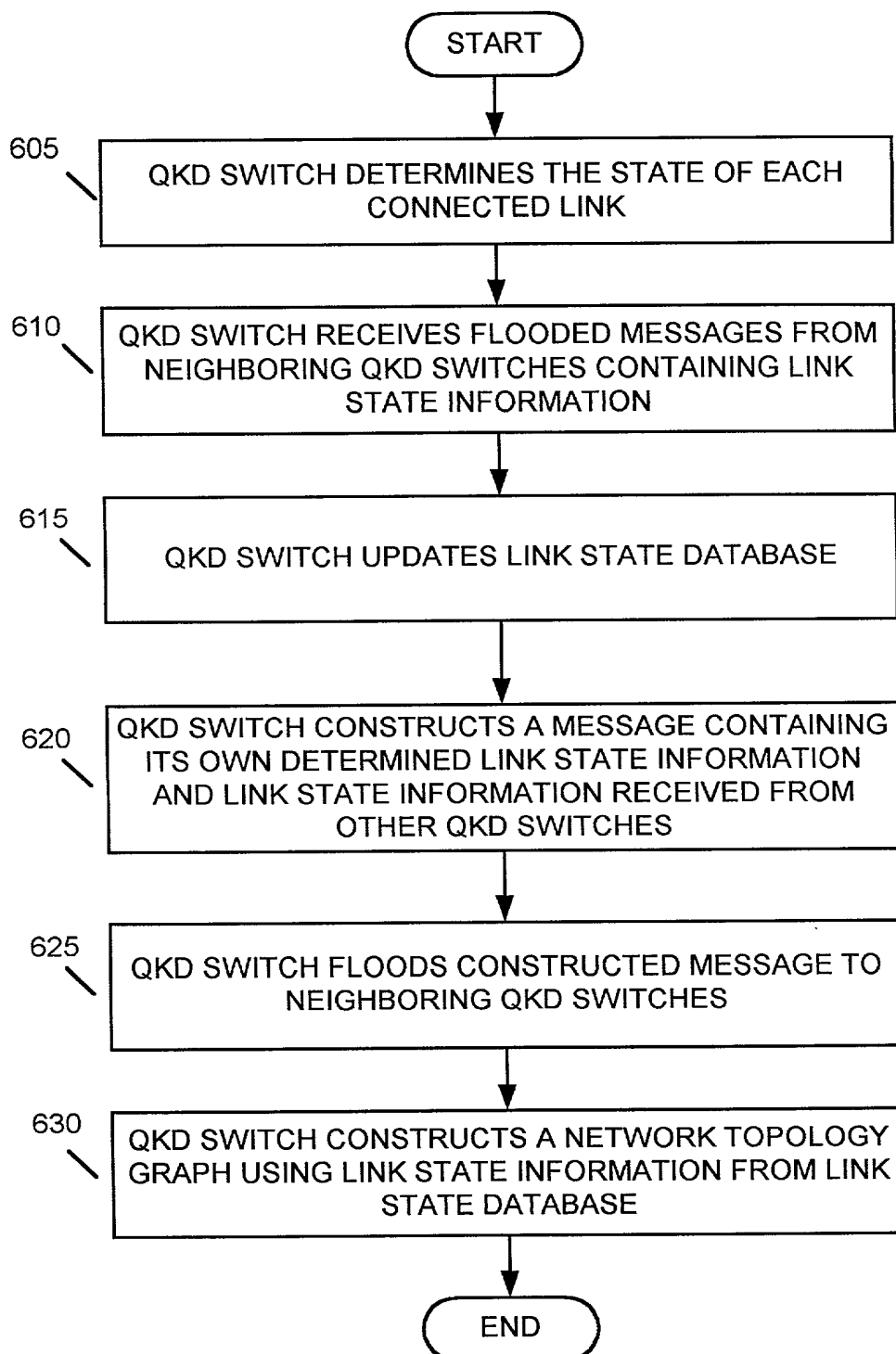
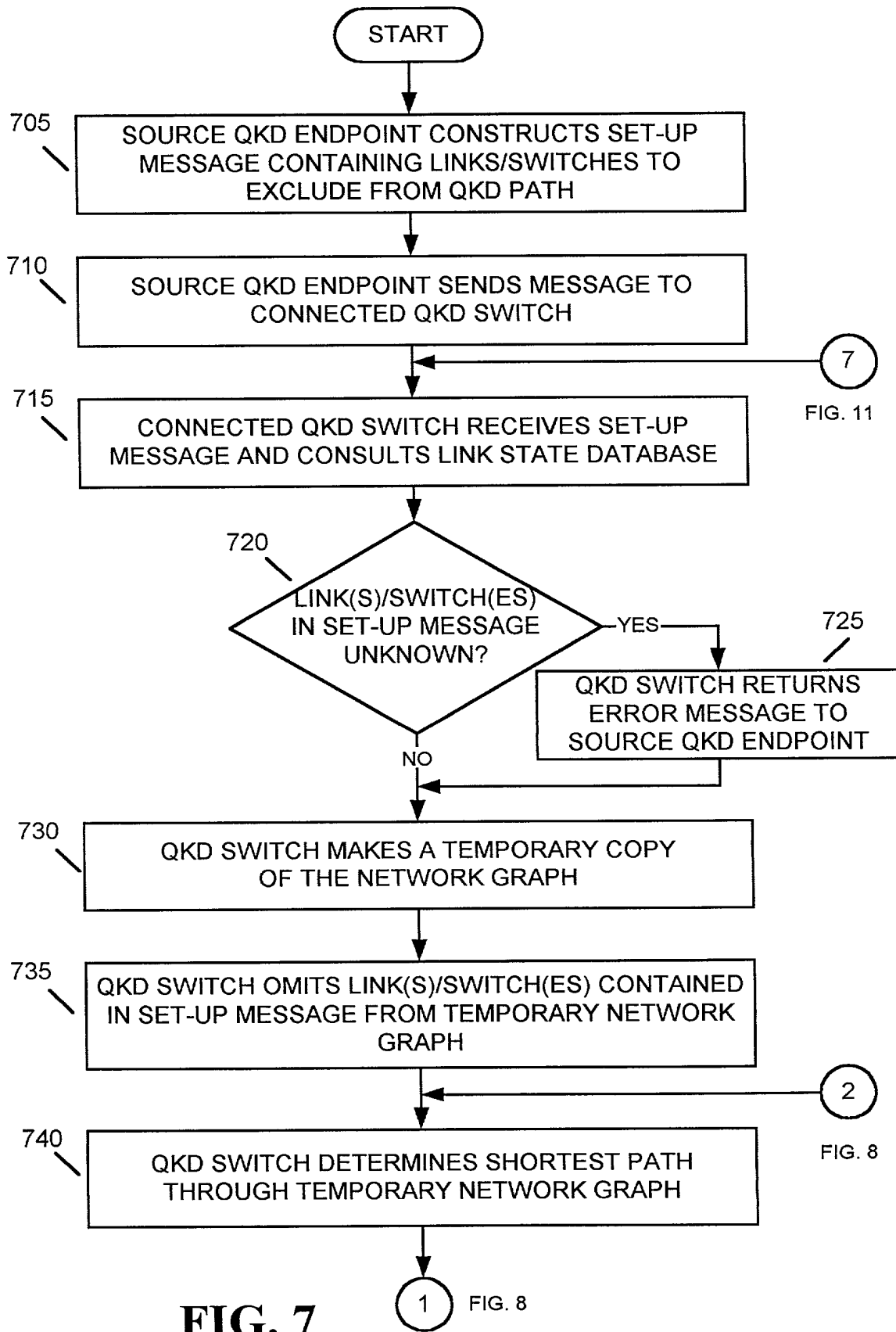


FIG. 6



1 FIG. 7

805 QKD SWITCH SENDS CONTROL MESSAGES TO EACH QKD SWITCH ALONG SHORTEST PATH FOR QKD PATH SET-UP

810
NACK MESSAGE OR
NO ACK/NACK MESSAGE
RECEIVED FROM EACH QKD
SWITCH?
YES

NO

815
QKD SWITCH OMITTS FROM TEMPORARY NETWORK
GRAPH THE QKD SWITCH(ES) FROM WHICH A NACK
OR NO ACK/NACK MESSAGE WAS RECEIVED

FIG. 7

2

820 QKD SWITCH RESPONDS TO SOURCE QKD ENDPOINT
WITH SET-UP OK MESSAGE CONTAINING QKD PATH
IDENTIFIER AND LINKS/SWITCHES IN PATH

825 QKD SWITCH STORES QKD PATH IDENTIFIER AND
LINKS/SWITCHES OF QKD PATH

END

FIG. 8

FIG. 8

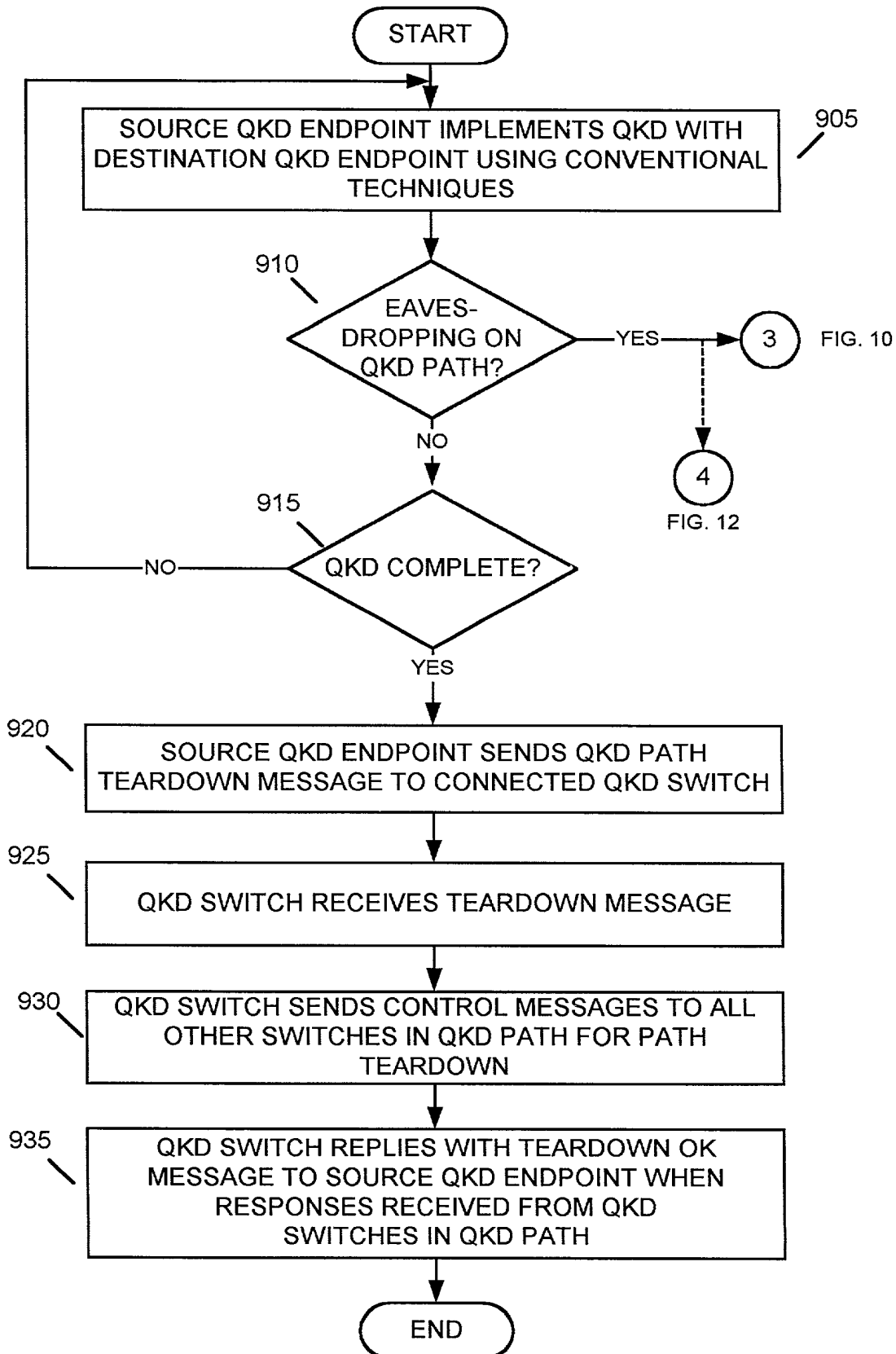


FIG. 9

3 FIG. 9

1005 SOURCE QKD ENDPOINT SENDS QKD PATH
TEARDOWN MESSAGE CONTAINING QKD PATH
IDENTIFIER TO CONNECTED QKD SWITCH

1010 CONNECTED QKD SWITCH RECEIVES TEARDOWN
MESSAGE

1015 QKD SWITCH SENDS CONTROL MESSAGES TO ALL
OTHER SWITCHES IN EXISTING QKD PATH FOR PATH
TEARDOWN

1020 QKD SWITCH REPLIES WITH TEARDOWN OK
MESSAGE TO SOURCE QKD ENDPOINT WHEN
RESPONSES RECEIVED FROM QKD
SWITCHES IN QKD PATH

FIG. 11

5

1025 SOURCE QKD ENDPOINT SENDS NEW SET-UP
MESSAGE CONTAINING ALL SWITCH/LINK IDs OF
PREVIOUS QKD PATH TO CONNECTED QKD SWITCH

6 FIG. 7

FIG. 10

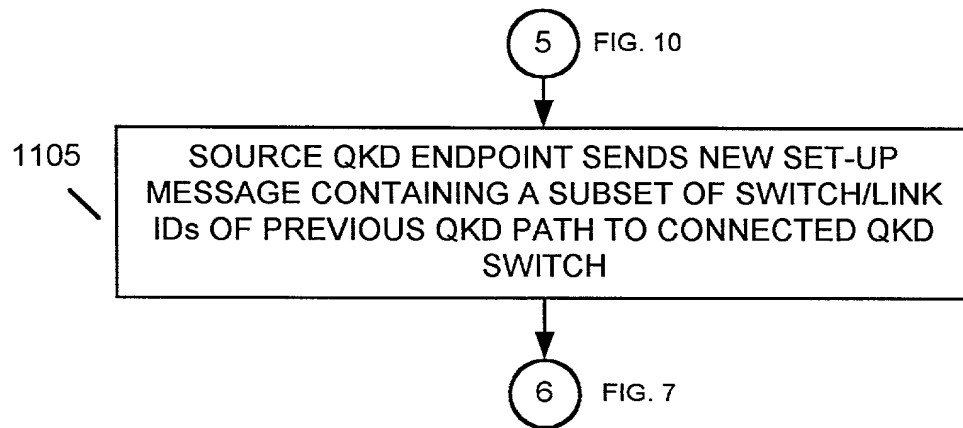


FIG. 11

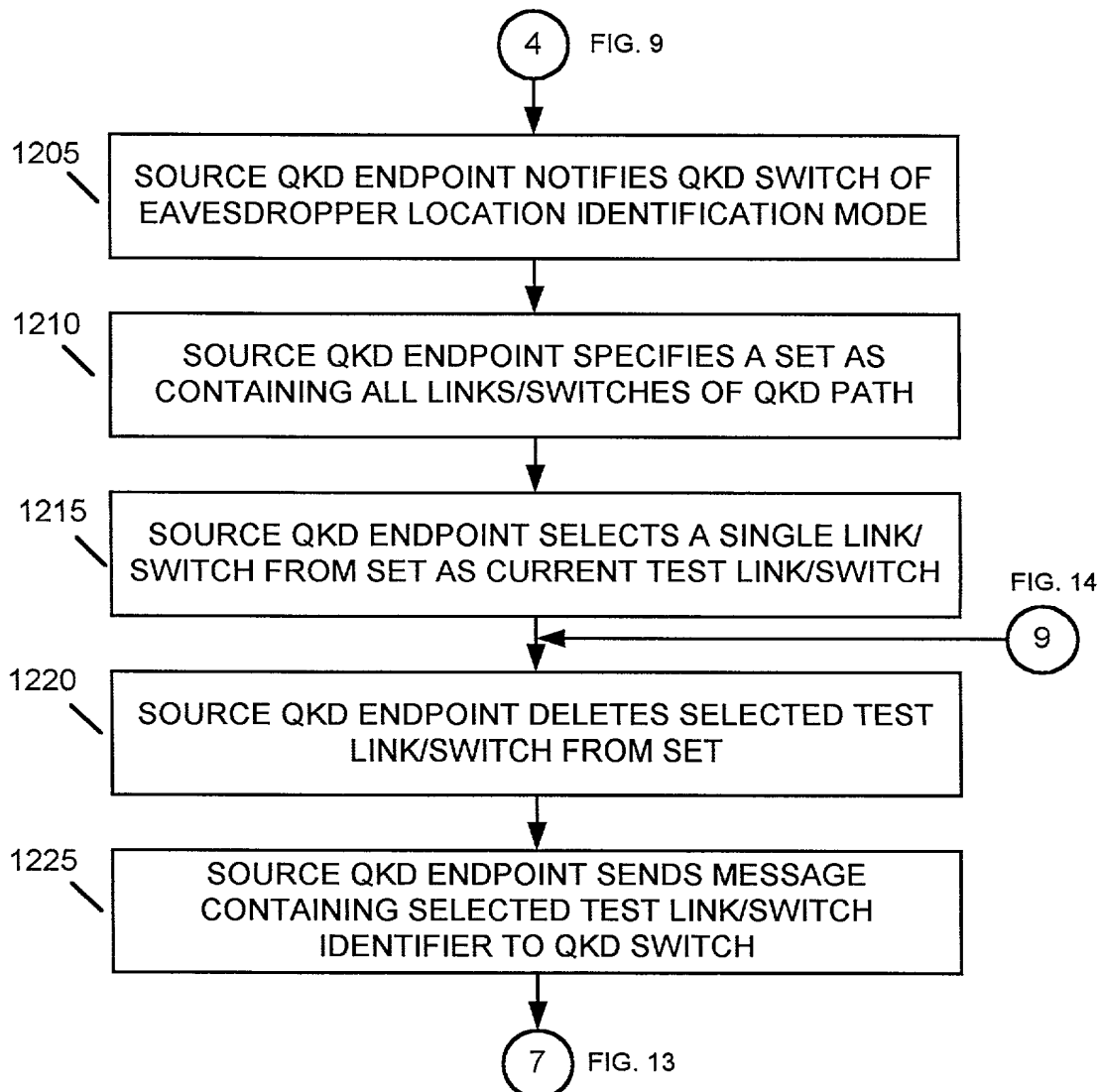


FIG. 12

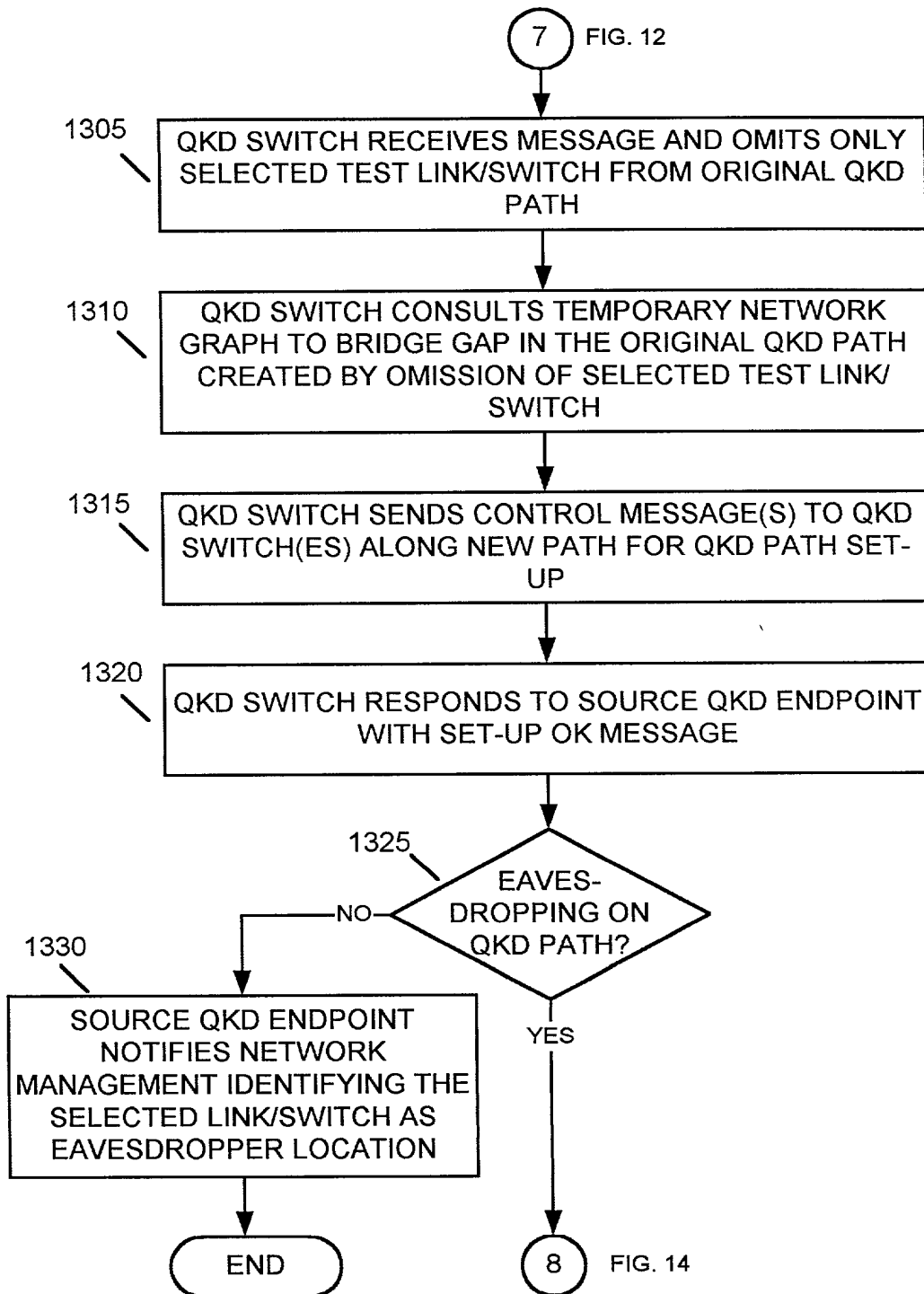


FIG. 13

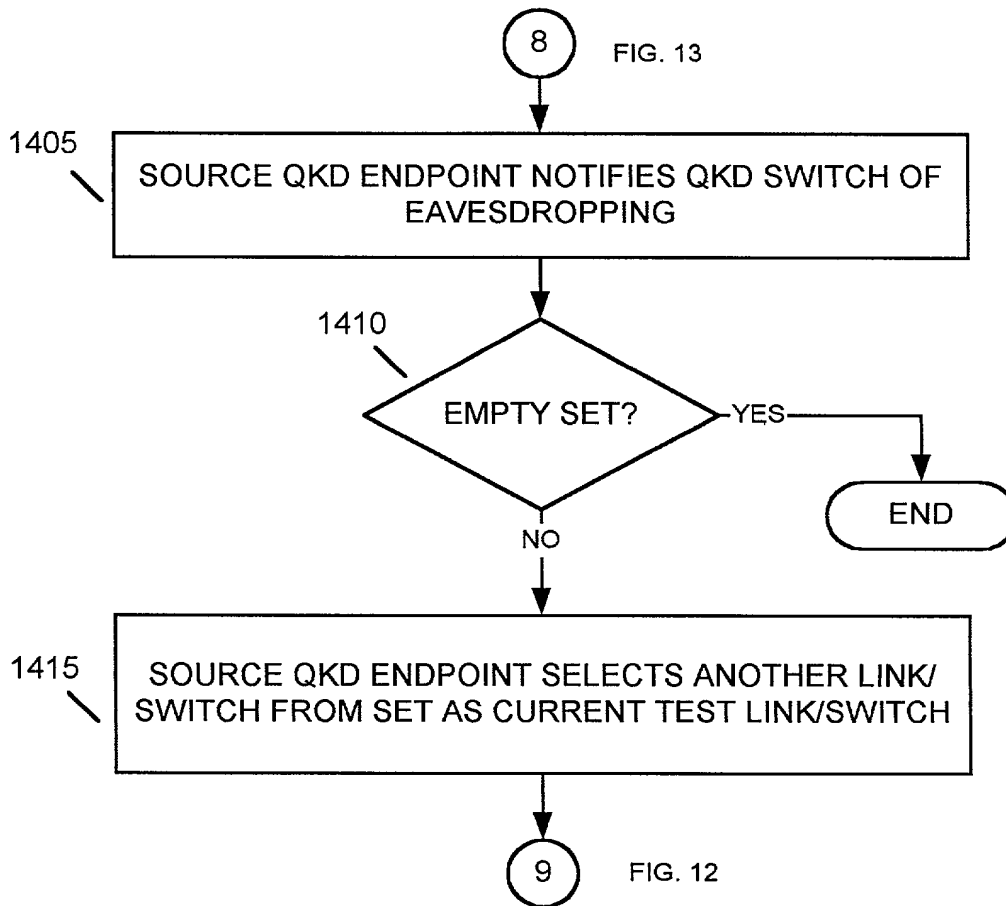


FIG. 14